DR. THOMAS REIBERGER (Orcid ID : 0000-0002-4590-3583)
DR. MATTIAS MANDORFER (Orcid ID : 0000-0003-2330-0017)

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Title page

Letter to the Editor: "Perioperative Presentation of COVID-19 Disease in a Liver Transplant Recipient"

Thomas Reiberger[1,2], M.D.; ORCID: 0000-0002-4590-3583
Mattias MANDORFER[1,2], M.D. Ph.D.; ORCID: 0000-0003-2330-0017

[1]Division of Gastroenterology and Hepatology, Department of Medicine III, Medical University of Vienna, Vienna, Austria
[2]Vienna Hepatic Hemodynamic Lab, Medical University of Vienna, Vienna, Austria

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Corresponding author: Thomas Reiberger, M.D.
Division of Gastroenterology and Hepatology,
Department of Medicine III,
Medical University of Vienna,
Waehringer Guertel 18-20,
1090, Vienna, Austria
Phone: +43 1 40400 47440, Fax: +43 1 40400 47350
E-Mail: *thomas.*reiberger@*meduniwien.ac.at*

List of abbreviations:
ACR acute cellular rejection
HBV hepatitis B virus
HCC hepatocellular carcinoma
HDV hepatitis D virus
LDLT living donor liver transplantation
LT liver transplantation
TACE transarterial chemoembolization

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Text

In a recent issue of Hepatology, Drs. Qin and Wang[1] report a case of a 37-year old patient with COVID-19 disease after undergoing liver transplantation (LT) for hepatocellular carcinoma (HCC). While these are interesting data on the course of COVID-19 disease in an immunosuppressed patient, we would like to highlight some particularly important issues related to management of liver disease and post-transplant care.

First, the exact staging of HCC, in particular, levels of alpha-fetoprotein and intrahepatic tumor load would be relevant to report. Since transarterial chemoembolization (TACE) was performed prior to LT, we assume that HCC tumor load was extensive requiring downstaging or bridging. However, since LT was “scheduled” for day 7, it seems that living donor LT (LDLT) was performed, which would suggest that TACE was applied for downstaging rather than bridging. Was the patient inside the “Milan criteria” or expanded criteria at the time of LT? How was the success of downstaging evaluated?

Second, there is no information on his underlying liver disease, i.e. hepatitis B virus (HBV) infection. Did the patient receive nucleos(t)ide analogues? What about hepatitis delta (HDV) co-infection? Did the patient have cirrhosis based on non-invasive tests or explant histology? How did the authors perform prophylaxis for recurrent HBV infection post-transplant?

Third, it would be interesting to know the dosing of the immunosuppressive regimen that was implemented after LT and the corresponding tacrolimus levels. The potential use of ATG as induction therapy and associated leukopenia may put patients at risk for a severe or even fatal course of COVID-19 infection[2].

The correct diagnosis of acute cellular rejection (ACR) after LT is particularly challenging in the context of COVID-19, which may itself lead to elevated transaminases[3]. After an initial decline in transaminases after LT, AST and ALT increased again and that was the reason why the authors suspected ACR and raised the dose of tacrolimus. COVID-19 infection per se or drug-induced liver injury are alternative reasons why the

transaminases were rising in this patient, and thus, we would strongly recommend to rely on liver biopsy to prove ACR before increasing immunosuppression. The long course (or relapsing course by PCR) of SARS-CoV-2 infection may have been provoked by the therapy administered for the suspicion of ACR, and thus, it seems essential to use all available diagnostic means (i.e., liver biopsy to assess ACR by histology) prior to raising immunosuppression in a patient with confirmed COVID-19 infection.

Finally, we would like to congratulate the authors for the successful management of this patient despite the current restrictions in health care resources. Moreover, we thank the authors for their important contribution regarding the management of COVID-19 infection in the perioperative setting after LT.

REFERENCES

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